



FEMA

HAZUS-MH Used for Risk Assessment and Hurricane Preparation

Harris County, TX - Harris County, Texas is the latest in a growing number of urban counties that has used HAZUS-MH for risk assessment and preparedness planning. In 2005, the county enlisted the support of a FEMA-authorized HAZUS vendor for flood and hurricane models to assess the risk to flood and hurricane hazards.

Harris County was in a unique position to initiate a Risk Assessment Program using HAZUS-MH in 2005. The Tropical Storm Alison Recovery Project (TSARP) provided up-to-date hydrologic and hydraulic data and new mapping tools. In addition, the County's unique relationship with the U.S. Army Corps of Engineers provided extensive economic and risk-assessment data from multiple completed and ongoing federal flood-reduction projects.

In Phase I of the Harris County Risk Assessment Project, a basic HAZUS-MH Level-1 analysis using the Hurricane Wind and Flood modules was run for the entire county to familiarize personnel with the program and provide a useful product that could be immediately used. In order to evaluate the program for a Level-2 analysis, a pilot watershed was selected and HAZUS-MH was populated with high-quality data specific to the watershed.

On September 21, 2005, the Harris County Office of Emergency Management (OEM) tasked the FEMA-authorized vendor to provide technical support in estimating potential losses from Hurricane Rita, using HAZUS-MH.

The hurricane approached on an erratic path, first threatening landfall far to the west, then changing course so that its track was closer to Harris County. Local government officials activated emergency preparedness protocols. By Wednesday, September 21, 2005, predictions placed Galveston and Houston directly in the path of the hurricane.

Harris County was spared a direct hit from Hurricane Rita. The storm did, however, give county personnel the opportunity to test their hurricane preparedness protocols and to evaluate planning and implementation of emergency response activities. The FEMA-authorized HAZUS vendor assisted the Harris County Office of Emergency Management (OEM) in applying HAZUS-MH predictive tools to the event.

Several conclusions can be drawn from the analyses performed during the Harris County Risk Assessment Program, including the HAZUS-MH software package can be successfully applied to a large urban county; a Level-2 analysis using local data to supplement the default national data does improve the results of the analysis; near real-time reporting of hurricane events is possible with the HAZUS-MH hurricane module by using NWS advisory bulletins; HAZUS-MH provided much greater detail regarding wind speed distribution throughout the County than was available through the normal news and information services.



**Harris County,
Texas**



Quick Facts

Sector:

Public

Cost:

Amount Not Available

Primary Activity/Project:

HAZUS-MH

Primary Funding:

**Other FEMA funds/ US Department of
Homeland Security**